

## WEST Search History

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DATE: Tuesday, March 30, 2004

Hide?	Set Name	Query	Hit Count
		<i>DB=USPT,EPAB,JPAB,DWPI,TDBD; PLUR=NO; OP=ADJ</i>	
<input type="checkbox"/>	L2	\$pyrimidin\$furan\$	48
<input type="checkbox"/>	L1	furan with pyrimidin\$	3458

END OF SEARCH HISTORY

AN 2001:133368 CAPLUS  
 DN 134:318931  
 ED Entered STN: 23 Feb 2001  
 TI Synthesis and properties of a new series of mesogenic compounds with  
 pyridine, oxidopyridinium, thienyl and furyl moieties  
 AU Kardas, Dorota; Mieczkowski, Jozef; Pociecha, Damian; Szydłowska, Jadwiga;  
 Gorecka, Ewa  
 CS Laboratory of Chemistry of Natural Compounds, Department of Chemistry,  
 Warsaw University, Warsaw, 00-093, Pol.  
 SO Journal of Materials Chemistry (2001), 11(3), 741-748  
 CODEN: JMACEP; ISSN: 0959-9428  
 PB Royal Society of Chemistry  
 DT Journal  
 LA English  
 CC 75-11 (Crystallography and Liquid Crystals)  
 Section cross-reference(s): 25, 27, 76  
 AB The synthesis and mesophase properties are presented for several  
 homologous series of structurally related compds. in which the aromatic ring  
 attached to 4'-alkyloxybiphenyl-4-ol was systematically changed. The  
 homologs with achiral and chiral terminal groups were studied. New  
 compds. forming both antiferroelec. and ferroelec. phases were obtained  
 for pyridyl and Ph derivs.  
 ST liq crystal pyridine thienyl benzene prepn phase behavior  
 IT Liquid crystals  
 (antiferroelec.; synthesis and properties of series of mesogenic  
 compds. with pyridyl and Ph derivs.)  
 IT Liquid crystals  
 (ferroelec.; with pyridyl, thienyl or Ph moieties)  
 IT Antiferroelectric materials  
 (liquid-crystal; synthesis and properties of series of mesogenic compds.  
 with pyridyl and Ph derivs.)  
 IT Ferroelectric materials  
 (liquid-crystal; with pyridyl, thienyl or Ph moieties)  
 IT Ferroelectricity  
 (of liquid crystals with pyridyl, thienyl or Ph moieties)  
 IT Phase transition enthalpy  
 (of series of mesogenic compds. with pyridine, oxidopyridinium, thienyl  
 and furyl moieties)  
 IT Liquid crystals  
 (preparation and phase behavior of series of mesogenic compds. with  
 pyridine, oxidopyridinium, thienyl and furyl moieties)  
 IT Homologous series  
 (synthesis and properties of series of mesogenic compds. with pyridine,  
 oxidopyridinium, thienyl and furyl moieties)  
 IT Liquid crystals  
 (transitions; of compds. with pyridine, oxidopyridinium, thienyl and  
 furyl moieties)  
 IT 127632-91-1P 221547-94-0P 285132-80-1P 335413-25-7P 335413-30-4P  
 335413-33-7P 335413-36-0P 335413-38-2P 335413-41-7P 335413-43-9P  
 335413-45-1P 335413-48-4P 335413-50-8P 335413-53-1P 335413-56-4P  
 335413-58-6P 335413-60-0P 335413-62-2P 335413-64-4P 335413-66-6P  
 335413-68-8P 335413-71-3P 335413-74-6P 335413-76-8P 335413-79-1P  
 335413-82-6P 335413-85-9P 335413-88-2P 335413-91-7P 335413-94-0P  
 335413-98-4P 335414-02-3P 335414-06-7P 335414-08-9P 335414-11-4P  
 335414-14-7P 335414-17-0P 335414-20-5P 335414-23-8P  
 335414-27-2P 335414-30-7P 335414-34-1P  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN  
 (Synthetic preparation); PREP (Preparation); PROC (Process)  
 (preparation and liquid crystal phase behavior of)  
 IT 335414-37-4P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation and reactant in preparation of alkyl  
 (dodecyloxybiphenyllyloxymethyl))

pyridinecarboxylates)  
 IT 335414-43-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation and reactant in preparation of alkyl  
 (dodecyloxybiphenyloxy)methyl)  
 thiophenecarboxylates)  
 IT 335414-40-9P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation and reactant in preparation of alkyl  
 (octyloxybiphenyloxy)methyl)py  
 ridinecarboxylates)  
 IT 72621-20-6P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation and reaction with Me (bromomethyl)thiophenecarboxylate)

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD

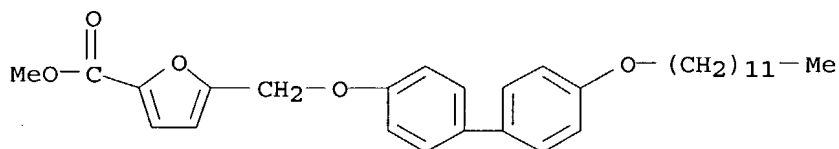
RE

- (1) Brunet, M; Ann Phys (Paris) 1978, V3, P137
- (2) Chandani, A; Jap J Appl Phys 1990, V29, P131
- (3) Chandrasekhar, S; Liquid Crystals 1992, P350
- (4) Glogarova, M; Mol Cryst Liq Cryst 1983, V91, P309 CAPLUS
- (5) Gorecka, E; Phys Rev Lett 1995, V75, P4047 CAPLUS
- (6) Holland, G; J Med Chem 1967, V10, P149 CAPLUS
- (7) Prasad, S; J Mater Chem 1995, V5, P2253 CAPLUS
- (8) Prasad, S; Phys Rev Lett 1995, V74, P270 CAPLUS
- (9) Szydłowska, J; J Mater Chem 1999, V9, P361 CAPLUS
- (10) Szydłowska, J; Mol Cryst Liq Cryst 1997, V301, P19 CAPLUS
- (11) Terzis, A; J Chem Phys 1997, V107, P4061 CAPLUS

IT 335414-27-2P 335414-30-7P 335414-34-1P  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN  
 (Synthetic preparation); PREP (Preparation); PROC (Process)  
 (preparation and liquid crystal phase behavior of)

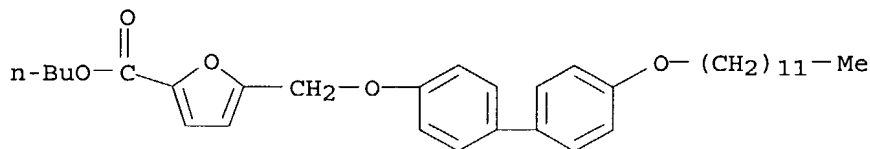
RN 335414-27-2 CAPLUS

CN 2-Furancarboxylic acid, 5-[[[4'-(dodecyloxy)[1,1'-biphenyl]-4-  
 yl]oxy]methyl]-, methyl ester (9CI) (CA INDEX NAME)



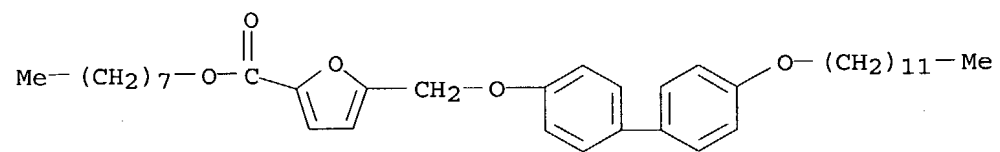
RN 335414-30-7 CAPLUS

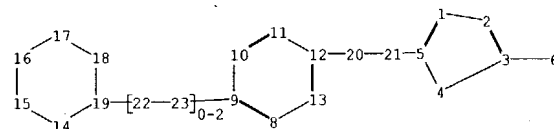
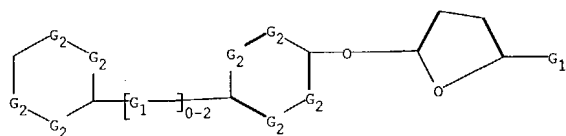
CN 2-Furancarboxylic acid, 5-[[[4'-(dodecyloxy)[1,1'-biphenyl]-4-  
 yl]oxy]methyl]-, butyl ester (9CI) (CA INDEX NAME)



RN 335414-34-1 CAPLUS

CN 2-Furancarboxylic acid, 5-[[[4'-(dodecyloxy)[1,1'-biphenyl]-4-  
 yl]oxy]methyl]-, octyl ester (9CI) (CA INDEX NAME)





chain nodes :

6 20 21 22 23

ring nodes :

1 2 3 4 5 8 9 10 11 12 13 14 15 16 17 18 19

chain bonds :

3-6 5-21 9-23 12-20 19-22 20-21 22-23

ring bonds :

1-2 1-5 2-3 3-4 4-5 8-9 8-13 9-10 10-11 11-12 12-13 14-15 14-19 15-16 16-17 17-18 18-19

exact/norm bonds :

1-2 1-5 2-3 3-4 3-6 4-5 5-21 8-9 8-13 9-10 9-23 10-11 11-12 12-13 12-20 14-15 14-19 15-16 16-17 17-18 18-19 19-22 20-21 22-23

G1:C,O

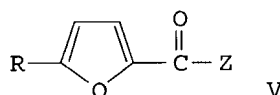
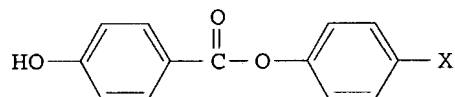
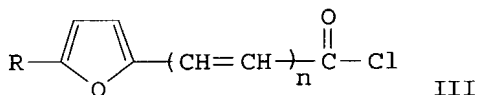
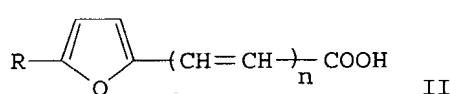
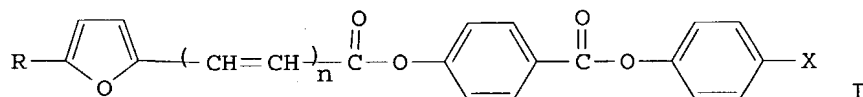
G2:C,N

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 8:Atom 9:Atom 10:Atom 11:Atom  
12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom 20:CLASS  
21:CLASS 22:CLASS 23:CLASS

AN 1988:539802 CAPLUS  
 DN 109:139802  
 ED Entered STN: 14 Oct 1988  
 TI Furan derivative liquid crystal compounds, intermediate compounds, and liquid crystal compositions  
 IN Satonaka, Hajime; Sawada, Toyoaki  
 PA Kanagawa Prefecture, Japan; Kawasaki Kagaku Kogyo Co., Ltd.  
 SO Jpn. Kokai Tokkyo Koho, 17 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C07D307-54  
 ICS C07D307-46; C07D307-68; C09K019-34; C09K019-46; G02F001-13  
 CC 75-11 (Crystallography and Liquid Crystals)  
 Section cross-reference(s): 25, 27  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 63060981	A2	19880317	JP 1986-105531	19860508
PRAI	JP 1986-105531		19860508		
OS	MARPAT 109:139802				
GI					



AB The title compound is represented by I and prepared by reaction of II with IV or III, which is prepared from II, with IV (R = C2-14 normal chain alkyl; X = CN, F, Cl, or Br; and n = 0 or 1). An intermediate product is represented by V (R = C7-14 normal chain alkyl; Z = H or OH) or II (R = C3-14 normal chain alkyl; n = 1). A liquid crystal composition is prepared with I.

I (R = n-C3H7, n = 1, X = CN) was prepared from 5-propyl-2-furylacrylic acid and 4'-cyanophenyl 4-hydroxybenzoate with N,N'-dicyclohexylcarbodiimide in pyridine-CH2Cl2 and with refining with MeOH.

ST furan deriv liq crystal compn

IT Liquid crystals

(furan derivs. for)

IT	116583-83-6	116583-84-7	116583-85-8	116583-86-9	116583-87-0
	116583-88-1	116583-89-2	116583-90-5	116583-91-6	116583-92-7
	116583-93-8	116583-94-9	116583-95-0	116583-96-1	116583-97-2
	116583-98-3	116583-99-4	116584-00-0		
	116584-01-1	116584-02-2	116584-03-3		

RL: PRP (Properties)

(liquid crystals from)

IT	1192-62-7P	3194-15-8P	3194-17-0P	3208-16-0P	3777-69-3P
	3777-70-6P	3777-71-7P	4179-38-8P	4208-57-5P	4229-91-8P
	4466-24-4P	5456-77-9P	5466-40-0P	6790-18-7P	7011-80-5P
	14360-50-0P	14497-25-7P	14497-27-9P	23074-10-4P	23074-13-7P
	56311-37-6P	67238-23-7P	68532-62-7P	75308-12-2P	77741-65-2P

78025-47-5P 81103-69-7P 83469-85-6P 86453-01-2P 86453-02-3P  
 91906-03-5P 116583-70-1P 116583-71-2P 116583-72-3P 116583-73-4P  
 116583-74-5P 116583-75-6P 116583-76-7P 116583-77-8P 116583-78-9P  
 116583-79-0P 116583-80-3P 116583-81-4P 116583-82-5P 116584-04-4P,  
 5-Ethyl-2-furylacrylyl chloride 116611-74-6P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)

(preparation and reaction of, liquid crystal from)

IT 50687-75-7, 4'-Chlorophenyl 4-hydroxybenzoate 70568-47-7, 4'-Cyanophenyl  
 4-hydroxybenzoate 102187-17-7, 4'-Fluorophenyl 4-hydroxybenzoate  
 113953-40-5, 4'-Bromophenyl 4-hydroxybenzoate  
 RL: RCT (Reactant); RACT (Reactant or reagent)

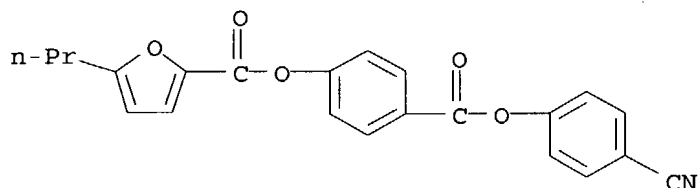
(reaction of, liquid crystal from)

IT 116583-97-2 116583-98-3 116583-99-4  
 116584-00-0 116584-01-1 116584-02-2  
 RL: PRP (Properties)

(liquid crystals from)

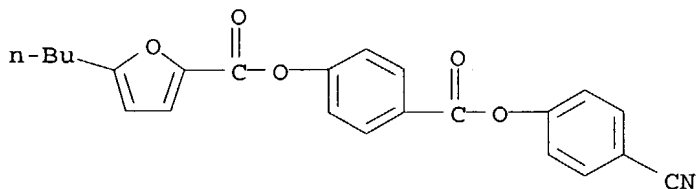
RN 116583-97-2 CAPLUS

CN 2-Furancarboxylic acid, 5-propyl-, 4-[(4-cyanophenoxy)carbonyl]phenyl  
 ester (9CI) (CA INDEX NAME)



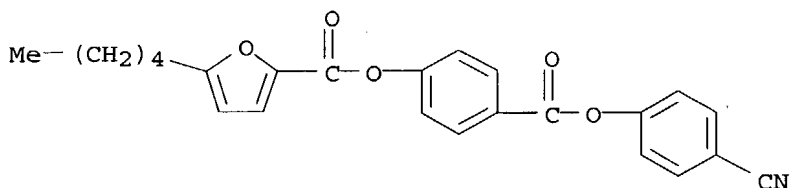
RN 116583-98-3 CAPLUS

CN 2-Furancarboxylic acid, 5-butyl-, 4-[(4-cyanophenoxy)carbonyl]phenyl ester  
 (9CI) (CA INDEX NAME)



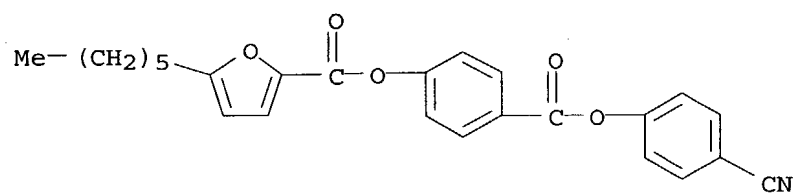
RN 116583-99-4 CAPLUS

CN 2-Furancarboxylic acid, 5-pentyl-, 4-[(4-cyanophenoxy)carbonyl]phenyl  
 ester (9CI) (CA INDEX NAME)



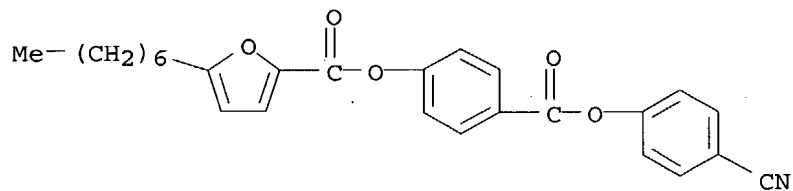
RN 116584-00-0 CAPLUS

CN 2-Furancarboxylic acid, 5-hexyl-, 4-[(4-cyanophenoxy)carbonyl]phenyl ester  
 (9CI) (CA INDEX NAME)



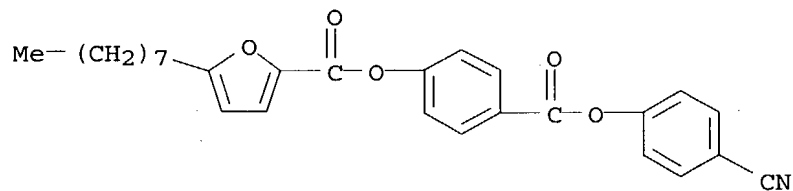
RN 116584-01-1 CAPLUS

CN 2-Furancarboxylic acid, 5-heptyl-, 4-[(4-cyanophenoxy)carbonyl]phenyl ester (9CI) (CA INDEX NAME)



RN 116584-02-2 CAPLUS

CN 2-Furancarboxylic acid, 5-octyl-, 4-[(4-cyanophenoxy)carbonyl]phenyl ester (9CI) (CA INDEX NAME)





AN 2001:165759 CAPLUS  
 DN 134:214985  
 ED Entered STN: 09 Mar 2001  
 TI Furan derivative and its use in ferroelectric liquid crystalline mixture  
 IN Wingen, Rainer; Hornung, Barbara; Schmidt, Wolfgang  
 PA Clariant G.m.b.H., Germany  
 SO Ger. Offen., 8 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 IC ICM C07D405-12  
 ICS C07D409-12; C07D307-68; C07F007-08; C09K019-34; C09K019-40;  
 G02F001-141; G09F009-35  
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 Section cross-reference(s): 27, 73, 75

*Handwritten signature/initials*

FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19941649	A1	20010308	DE 1999-19941649	19990901
	WO 2001016131	A2	20010308	WO 2000-EP8518	20000831
	WO 2001016131	A3	20010830		
	W: DE, JP, KR, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1214316	A1	20020619	EP 2000-960572	20000831
	EP 1214316	B1	20030507		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
	JP 2003508395	T2	20030304	JP 2001-519697	20000831
PRAI	DE 1999-19941649	A	19990901		
	DE 1999-19941650	A	19990901		
	DE 1999-19941651	A	19990901		
	DE 1999-19941653	A	19990901		
	DE 1999-19941654	A	19990901		
	DE 1999-19941656	A	19990901		
	WO 2000-EP8518	W	20000831		

OS MARPAT 134:214985

AB The furan derivative is represented by a general formula  
 $R1X(A1M1)a(A2M2)bA3YTZR2$  (T = furan-2,5-diyl, furan-2,4-diyl; R1 = H, C1-20-alkyl, C2-20-alkenyl; R2 = H, C1-20-alkyl; X = single bond, -O-, -OCO-, -CO2-, -OCO2-; Y = -OCO-, -OCH2-, -CH2CH2-; Z = single bond, -O-; A1-3 = phenylene-1,4-diyl, phenylene-1,3-diyl, cyclohexane-1,4-diyl, etc.; M1, M2 = -OCO-, -OCH2-, -CH2CH2-, -OCOCH2CH2-, -OCH2CH2CH2-, -C.tplbond.C-, -CH2CH2CH2CH2-, single bond; a, b = 0, 1). The liquid crystal mixture contains 0.01-80 % of the above furan derivative. The liquid crystal mixture is suitable for ferroelec. switches and/or active matrix liquid crystal displays.

ST furan ferroelec liq crystal mixt switching device display

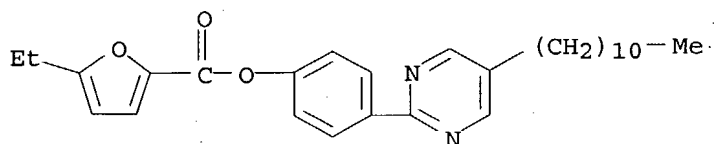
IT Liquid crystals  
 (chiral smectic; furan derivative and its use in ferroelec. liquid crystalline mixture)

IT Liquid crystal displays  
 (furan derivative and its use in ferroelec. liquid crystalline mixture for)

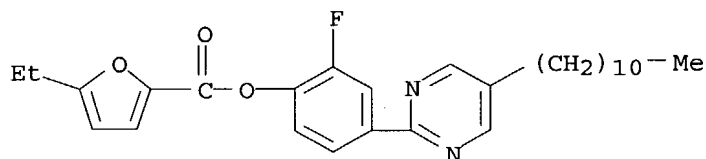
IT Shutters  
 (liquid-crystal light valves; furan derivative and its use in ferroelec. liquid crystalline mixture for)

IT 54355-76-9 56311-37-6, 5-Ethyl-2-furancarboxylic acid 102408-52-6  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of furan derivative for ferroelec. liquid crystalline mixture suitable for ferroelec. devices)

IT 328257-23-4P 328257-24-5P 328257-25-6P  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (preparation of furan derivative for ferroelec. liquid crystalline mixture suitable for ferroelec. devices)  
 IT 328257-23-4P 328257-24-5P 328257-25-6P  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (preparation of furan derivative for ferroelec. liquid crystalline mixture suitable for ferroelec. devices)  
 RN 328257-23-4 CAPLUS  
 CN 2-Furancarboxylic acid, 5-ethyl-, 4-(5-undecyl-2-pyrimidinyl)phenyl ester (9CI) (CA INDEX NAME)



RN 328257-24-5 CAPLUS  
 CN 2-Furancarboxylic acid, 5-ethyl-, 2-fluoro-4-(5-undecyl-2-pyrimidinyl)phenyl ester (9CI) (CA INDEX NAME)



RN 328257-25-6 CAPLUS  
 CN Pyrimidine, 2-[4-[(5-ethyl-2-furanyl)methoxy]phenyl]-5-undecyl- (9CI) (CA INDEX NAME)

